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ABSTRACT

This document describes a series of seminars held over a 2-year period to help plan for independent and individualized instruction. The first year seminars resulted in the conception of a 2-dimensional system into which all independent and individualized instructional programs could be fitted -- i.e., the means or media (the ways of getting to the objectives) and control (the determination of who sets the objectives.) The participants were polled for their chief concerns in the area of individualized and independent study, and a checklist of questions was developed from expressions of teacher concerns. Seven headings resulted that comprise an analysis of the management function and which were then used as the structure for the second seminar in 1971. Among these headings were the processes whereby students responsibly entered worthwhile independent study programs, new learning environments were created, new learning environments were sustained, guiding students became a cross-educator responsibility, and student and program strengths and weaknesses were responsibly evaluated. Provisions were made for modifying these processes when necessary. The papers submitted to the seminars are listed in an appendix. (Pages 33-35 may reproduce poorly.) (Author/MLF)

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TUCSON PUBLIC SCHOOLS
DEPARTMENT OF LEARNING DEVELOPMENT

RECORD OF AN EFFORT AT FUTURE-PLANNING THROUGH IN-SERVICE: INDIVIDUALIZED INSTRUCTION IN TUCSON PUBLIC SCHOOLS, 1970-1971

JANUARY, 1972

Compiled by
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U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION
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FORWORD

Future-Planning--An Act of Intelligence

A school district can no more succeed in its mission without exercising the art of accurate prediction than can industry or the larger government. Predictability "is not only the polestar of the scientist,...it is also the bedrock foundation of sanity, of adequate everyday social and personal adjustment" (Johnson 1946). Tucson Public Schools District No. 1 has been in the forefront of public school districts which have consciously used prediction as policy. Taxpayers, students, and teachers of District No. 1, for example, have benefited enormously, both financially and educationally, from the foresight of Herbert E. Cooper, Assistant Superintendent for Administration, who spent eighteen years buying up parcels of desert land in accurate forecast of the rate and direction of Tucson's growth (Gilman 1971).

Although some may argue that predictions of another order, e.g., concerning the curriculum or methodology, are less obviously grounded in cause-and-effect relationships, we must insist that, if that is true, we must simply try harder to find them. A drift of attitude and practice in the face of so much evidence of both social change and the need for more change would seem to be a flagrant act of irresponsibility.

This paper will attempt to state the case for an "anticipatory

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democratic" effort of a large number of Tucson Public Schools educators over a two-year period to help plan for independent and individualized instruction. Their effort resulted in some tentative statements concerning the desirable nature of changed instruction in our time. It is greatly to be hoped that their effort will not be ignored or overlooked in decision making.

BACKGROUND

Individualization of Formal Instruction--An American Dilemma

From its inception, American society has tended to be strongly committed to the worth of individual performance (Glaser 1969). Traditionally, however, this commitment has been tempered by exigencies of what has been considered desirable, perhaps absolutely essential, social, economic, and academic competition. In recent years, as an increasing percentage of young people remain longer and longer in the formal educational setting, educators have become aware of being more deeply impaled on the horns of a dilemma: the unrelenting pressure of the spirit of competition, working to constrain opportunities, contradicts a rising popular expectancy, if not demand,that opportunity be virtually limitless and of uniformly high quality.

In education, one pattern of adapation to individual differences intended to maximize opportunity for successful individual performance has been to provide for limited optional objectives in learning,while simultaneously fixing the instructional program rigidly within each limited option. The adaptation seems to have created sharp cleavages among the performance capabilities of 1) youth without goals, 2) youth

with vocational goals, and 3) youth with academic goals. These cleavages increase the probability of perpetuating the social ills of ethnic minorities, of the socially alienated, and the economically disadvantaged. This solution to the individualization dilemma, while widely implemented, is less and less acceptable as the public becomes conscious of and receptive to the critical needs of all sectors of the American community.

At the other end of the continuum, another pattern of adaptation to maximize individual performance calls for wide variance of educational procedures and the sequencing of broadly needed education goals to accommodate individuals as individuals. In effect, this adaptation approaches private tutoring in mass educational settings--something that with educational technology and management techniques has at last become thinkable (Brabner 1970, Umans 1971). In implementing this adaptation, the school ideally provides an elaborate diagnosis of the individual's learning habits and attitudes, achievement, skills, cognitive style,etc. From this analysis a prescription is made for a course of instruction which uniquely fits the individual. This pattern would seem to hold great promise of helping to resolve the individualization dilemma at some time in the future.

If the above two forms of adaptation to individual differences are perceived as extremes on a continuum, it would seem that realistic thinking now would urge movement away from rigid programming of instruction toward more flexible individually prescribed and individually implemented instruction. Futhermore, if competition, heretofore a reality factor, is really an essential condition of successful and responsible interaction in American society, education

must not attempt to eliminate it, but must attempt to provide it for each student at his level and mode of tolerance.

Teacher Initiative--A Necessary Condition of Changed Attitudes and Practice in Formal Instruction

The needed adaptation to individual differences must be led by educators who, for the most part, have not been trained to carry it out. Critics have long observed that schools of education train teachers only in total class management of learning. Except on their own initiative, therefore, teachers are not ready to diagnose and evaluate student performance on an individualized basis.

It must also be borne in mind, that many teachers, especially in secondary schools, feel a strong commitment to profess their academic discipline. For them, (and there is a long tradition validating the claim), the integrity of the discipline outweighs most discussion of individual differences and their accommodation. Such teachers may accept uncritically the full implication of academic competition. For a long time, also, opinion has favored the selection of teachers who are strong subject-matter specialists. Attitudes and skills that might be especially useful in individualizing instruction have not been important considerations in the employment and retention of teachers. Most practicing teachers, therefore, cannot now be expected to possess the training or the attitudes needed to implement individualized instruction. This greatly exacerbates the present dilemma.

In view of these circumstances, it would seem that if there is to be significant movement toward individually prescribed and individually implemented instruction, it will come about only because willing members of the teaching profession want it and join together to change their

attitudes and practices in the needed direction. There must develop among them a real willingness to learn from the learner how to teach. This has been the rationale underlying the Tucson Public Schools in-service programs, Independent Study (1970) and Independent and/or Individualized Study Management Seminar (1971).

Planning the Independent Study Seminar, 1970

Several members of the Central Staff saw widespread individualized instruction as one of a number of changes rapidly approaching on the educational horizon. They believed there would be time to prepare for it through "anticipatory democratic" processes if sufficient interest in doing so existed in the schools. Thus, early in the 1969-70 school year, Allan S. Hawthorne, then Assistant Superintendent of Secondary Education, formed a Pre-Planning Committee of three Secondary Education coordinators to study and recommend a planning strategy.

The Pre-Planning Committee polled all secondary teachers and administrators and the coordinating staff (Fall, 1969) for the degree and extent of interest and desire for involvement in an "Independent Study Seminar". The following tentative definition of independent study was proposed as a focus: "A teacher-planned or teacher-guided course of study in which the student is granted more or less complete responsibility for organizing his work (or for using programmed and similar materials), pacing himself, planning objectives, utilizing resource persons and materials, etc., under conditions of quality control which do not frustrate the student's independence."

About 40 respondents indicated an interest in helping plan the proposed seminar. They met with the Pre-Planning Committee (December, 1969) and agreed upon the essential framework of the seminar, forming

a permanent Planning Committee of three teachers and three coordinators to work out the details. In the meantime, about 30 teachers had signed up to make presentations and to lead the discussion that made up the seminar.

In the final format, three presenters were each given 15 minutes of time for exposition at two identical bi-weekly meetings conducted at two-week intervals from January 12 through May 21, 1970. At each meeting the presentations were followed by three rotating small-group discussions at which participants were able to interact personally with any one, two, or all three presenters.

Program of the Independent Study Seminar, 1970

The program of the Seminar was published in advance as Proceedings of the Tucson Public Schools Seminar on Independent Study, which contained abstracts of the projected presentations. The proceedings are reproduced as APPENDIX A of this report.

The Seminar was described in the January, 1970 issue of Up Date, Volume 4, Number 2, a quarterly publication of the Council on Instruction, Tucson Public Schools. This is reproduced as APPENDIX B of this report.

Papers submitted to the Seminar are listed in APPENDIX C. The papers may be borrowed from the Educational Materials Center.

Findings of the Independent Study Seminar, 1970

In the final session of the seminar, May 21, 1970, David T. Smith, Coordinator of Science and member of the Pre-Planning and Planning Committees, presented the following diagram and analysis of the types of independent study programs which had been discussed during the Seminar:

MEANS or MEDIA	OBJECTIVES: SCHOOL DETERMINED	OBJECTIVES: LEARNER SELECTED
SYSTEM DETERMINED	TYPE A "INDIVIDUALLY DIAGNOSED AND PRESCRIBED"	TYPE C "PERSONALIZED"
LEARNER SELECTED	TYPE B "SELF-DIRECTED"	TYPE D "INDEPENDENT STUDY"

(Type A) Individually diagnosed and prescribed learning activities are usually related to school- or teacher-determined means. The teacher, for example, decides on a particular set of objectives, performs a pre-test to determine the degree of proficiency in that objective, and then prescribes a learning activity designed to move the student from his present competence to that called for by the objective. Type A is usually developed for all students and is most often found in the "required" areas of the curriculum. Teachers who discussed this type in the Seminar: Ed Kuhn, Dorothy Engel and Josephine Muramoto, Violet Hurston, David Hooker, Felizardo Valencia, David Smith, Bob Thomas, and John Bockman.

(Type B) Self-Directed Study also makes use of school-or teacher-made objectives, but allows the student freedom in the choice of means of attaining those objectives. Thus, a teacher whose objectives include

mastery of some item of subject matter (U.S. History) or process (Letter Writing) will contract with a student who in turn will study, practice, drill, or otherwise prepare himself to demonstrate the attainment of that objective. The result is self-directed study. Discussion of Type B, which is also most often found in required or sequential subjects and is usually reserved for high-ability students, is found in the presentations of Dennis Cawley, Stanley Wagner, Phil Roy, Merle Denning, Russell Weir, and Lee Wright.

(Type C) Personalized Learning is characterized by the student's selection of objectives from among an assortment offered by the teacher or school. A pupil in a general area (shop) may elect to meet the objectives of the program by working with a particular medium of his choice (e.g., sheet metal). Type C is reported most often used with average students in the elective areas. Often there is crosstyping of Types B and C, as is seen in the discussions by Mary Belle McCorkle and Virginia Robinson. Other presentations dealing with Type C were made by Bob King, Susan Shoemaker, Chet Sheaffer, Marjorie Benson, and Francis Rickert.

(Type D) Independent Study allows the student the freedom of choice of both variables involved. The student's objectives are developed and he selects the means for their attainment. The student also takes the responsibility of determining the proficiency level which marks the satisfaction of the program objectives. Type D usually involves the elective areas of the curriculum and is most often reported used with students of high ability. Presentations of this type were made by Richard Gorby, Elden Mathews, and Winifred Murray.

In his summary, David Smith saw existence of a two-dimensional system into which all independent and individualized instructional programs may be fitted, the dimensions being, 1) the means or media,

i.e., the ways of getting to the objectives, and 2) control, i.e. the determination of who sets the objectives. Both means and the control exist on continua. Put into this framework, the kinds of available programs may be analyzed. Finally, this sort of analysis may give rise to the concept of the orchestration of learning activities by the teacher.

Shortly before the end of the Seminar, the participants were polled for their chief concerns in the area of individualized and independent study. These were made the subjects of small-group discussions at the final session:

1) How to control students in independent study programs;

2) How to motivate students;

3) How to grade;

4) How, when, and if to limit independent study;

5) How to get started, both from teacher and student points-of view;

6) How to evaluate effectiveness;

7) How to anticipate potential hazards;

8) How to exercise responsibility.

The small-group discussions produced the following tentative conclusions (Spring, 1970):

1) Student control

Student control is one of the most critical problems in independent study because controls obviously diminish independence. However, it must be recognized that students are not experienced in the independent handling of themselves and their learning affairs in formal school settings. For this reason, independent study should perhaps come by degrees until students prove their ability to function responsibly. As a matter of policy, every student should always have someone to

report to regularly, and should have projects in different subject areas to ensure that he will get a balanced education.

2) Motivation

Motivation develops from a set of personally meaningful goals and objectives, and from ideas or concepts that the student is able to handle. Motivation is intrinsic; it must be recognized, therefore, that not all students will be motivated by independent study.

3) Grading

It seems contradictory and self-defeating to encourage and motivate a student to work independently and then not involve him in the evaluation of his work. Grading should be done by teacher and student evaluating outcomes together.

4) Limitations

It must not be forgotten that all learning is an individual matter, and that the student will learn what he wishes in spite of a teacher. Teachers should redefine school objectives, since content and process are constantly being confused.

5) Getting started

Getting a successful start is a matter of caution and of not going "whole-hog". Independent study may be one of a great many techniques employed simultaneously by a teacher. A gradual shift should be made from content orientation to process orientation.

6) Evaluating effectiveness.

An accurate description of present behavior should be obtained as a base for later measurement. Objectives should be carefully determined and precisely stated so that the student knows what he is expected to do. Anecdotal records may be used also for a new

interpretation of goals and efforts needed to achieve them.

7) Anticipating potential hazards

The student should be required to demonstrate 100% familiarity with any dangers that might be associated, however remotely, with the independent study project. Some sort of evidence should be kept, perhaps but not necessarily in the form of a contract, that the student and his parents are aware of the nature of the program. Requests to leave an independent study program should be honored, and an honorable exit from an independent study program should be provided. The more radical independent study programs may need the protection of a system-wide contract or definition of new relationships, perhaps by the Board of Education.

8) Exercise of teacher responsibility

The teacher has the responsibility of 1) helping the student determine limits and goals; 2) involving students as a group on some occasions; 3) determining the stages of project development and deadlines; 4) helping the student acquire the tools for making decisions and solving problems; 5) setting the atmosphere in which the student can function effectively; and 6) providing guidance, but not direction.

Planning the Independent and/or Individualized Study Management Seminar, 1971

At the end of the 1970 Independent Study Seminar, a member of the Planning Committee analyzed the above expressions of teacher concerns and developed from them a checklist of questions which might be asked of any independent or individualized study program by a student, a parent, or a taxpayer. The checklist appears as APPENDIX D of this report. The questions fall under seven headings which comprise an analysis of the management function:

1) Processes whereby a student responsibly enters a worthwhile independent study program;

2) The processes of responsibly creating a new learning environment;

3) The processes of responsibly sustaining the new learning environment;

4) The processes of cross-educator responsibility for guiding students;

5) Responsible uses of physical, material, and human resources to sustain the learning environment;

6) The processes of responsibly evaluating student and program strengths and weaknesses;

7) Provisions for modifying processes when necessary.

This analysis was submitted to the Planning Committee early in the 1970-71 school year, and was used by the Committee as the structure of a second seminar entitled Independent and/or Individualized Study Management Seminar.

The format of the second seminar was planned to follow substantially that of the first seminar, except that instead of three presenters, each session was to be conducted by a panel of educators with experience in the management of independent or individualized programs. Each session was devoted to one of the checklist headings which appear above.

Program of the Independent and/or Individualized Study Management Seminar, 1971

The program appears as APPENDIX E of this report.

Findings of the Independent and/or Individualized Study Management Seminar, 1971

"Comments in Summary and Evaluation," a presentation by John F. Bockman, appearing as APPENDIX F of this report, attempted in the concluding discussion to isolate the management of learning as an instructional function. The attempt was made to show that the student's time and energy, can, through the teacher's skillful management, be freed from mass constraints while his education is formed by structure-for-learning designed for him more or less personally. Professional responsibility for initiating and maintaining structure at all times had been stressed throughout the Seminar, with the qualification that structure be as far as possible self-imposed by the student rather than super-imposed by the teacher. The notion of something akin to structureless and formless "instruction", an obvious contradiction in terms, was rejected.

Participants at the final session developed the following guidelines for the management of independent and/or individualized study.

Guidline 1: New learning environments should be planned with caution, taking due account of the environment of the school. Planning must include all others on the staff who will be affected by it. Communication and feedback should be open and encouraged.

Acceptance of the new learning environment should be sought from all groups in the community affected by it.

New learning environments should be created with full recognition of the existing limitations of the resources.

Guideline 2: A teacher must be able to pull together sufficient knowledge of learning theory, sufficient knowledge of a wide range of subject matter, sufficient sense of organization, sufficient experience in dealing with individuals to ensure reasonable success of the new learning environment.

A student must be called on to make a clear statement of his goals,objectives and time use constraints to ensure reasonable success in the venture.

Guideline 3: The process of responsibly sustaining the new learning environment depends upon:

a) Use of some form records. (One form should be a statement of progress in terms of objectives.)

b) Records mutually developed by both teacher and student out of the project itself should lead toward additional study.

Guideline 4: Given that the several educators share a mutual set of students involved in individualized program: Assurances should be made that those educators agree upon the student program objectives and cooperatively coordinate the implementation of activities leading toward competence in those objectives.

Guideline 5: Control of all parameters of the environment to the maximum extent possible is necessary. This calls for extensive, cooperative pre-planning for all relationships: teacher-pupil, teacher-librarian, teacher-community resources, pupil-pupil, pupil-librarian, etc.

A management center or some other facility for communication is necessary. Specific provision should be made for coordinating the resources and trouble-shooting the problems that the new learning environment creates.

Guideline 6: Evaluation depends on responsibly established goals and being conscious of them.

Assessment tasks that are set either too low or too high with respect to the objectives posed fail to help a student responsibly progress through a program.

Programs as well as students must be fairly evaluated.

Guideline 7: Provisions for modifying processes should be pre-planned to prevent crises from occurring. It may be desirable, for example, to expect certain kinds of program failures and to develop certain techniques for recycling student learning opportunities depending on the nature of the program. Definitions should be developed to distinguish carefully among certain easily confused phenomena. Techniques of observation should be developed to help distinguish among them, e.g. time wasting, creative thinking, contemplation, needed relaxation, socialization which distracts from learning opportunities, and transactions of various kinds which promote unanticipated learning of a high order.

CONCLUSION AND RECOMMENDATION

This report has been compiled in the hope of demonstrating the extent to which a large group of educators, broadly representative of Tucson Public Schools' teachers and administrators, became involved over a two-year period in an effort to solve instructional problems through group interaction. It has been frequently charged that contemporary institutions are unresponsive to the needs of their members, in this case, both students and educators. This report should indicate that the charge is not always entirely true. One is aware, however, of a lack of machinery whereby the membership can get its proposed solutions to common problems translated into organization policy. The lack of such machinery is bound to create a feeling of impotence and frustration among those who sense strongly the need for concerted thought and action. It is recommended, therefore, that the deliberations of these seminars be subjected to additional scrutiny and contribution from other sources in the District, according to some plan, and eventually incorporated into a District philosophy without excessive delay.

REFERENCES

Brabner, George, Jr., "The Decline of Pedagocentricity," Educational Technology, 10: 11-18, November, 1970.

Gilmin, Richard, "Housing Developments Multiply in Eastside Growth Explosion," The Arizona Daily Star, November 19, 1971

Glaser, Robert, "The Design and Programming of Instruction," The Schools and the Challenge of Innovation, CED Research Advisory Board. New York, 1969.

Johnson, Wendell, People in Quandaries, New York, 1946.

Umans, Shelley, The Management of Education, Garden City, New York, 1971.

APPENDIX A

PROCEEDINGS
OF THE
TUCSON PUBLIC SCHOOLS
SEMINAR ON INDEPENDENT STUDY
1970

APPENDIX B

INDEPENDENT STUDIES
SEMINARS IN SESSION

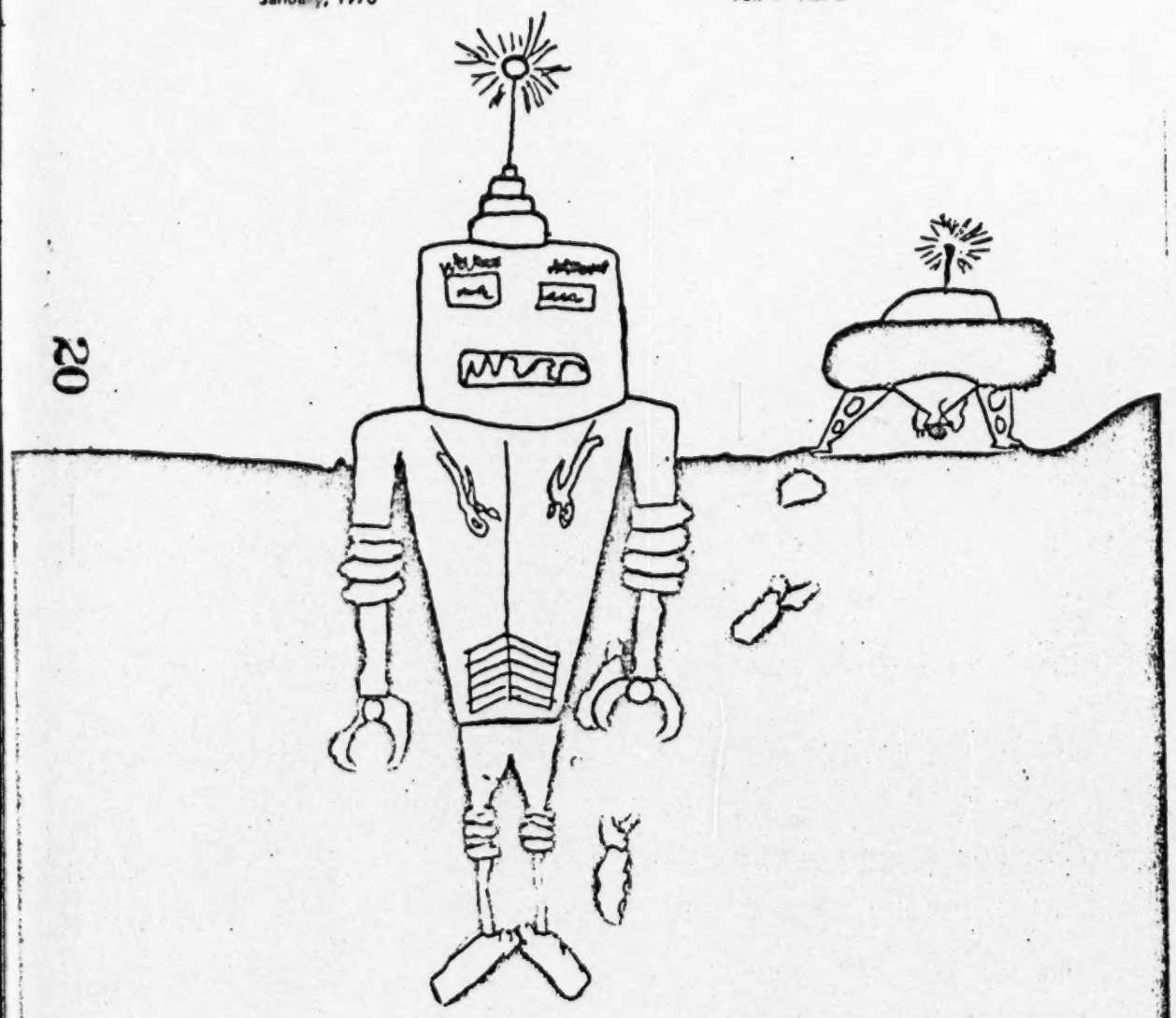
Up Date
January, 1970
Vol. 4, No. 2

UP DATE

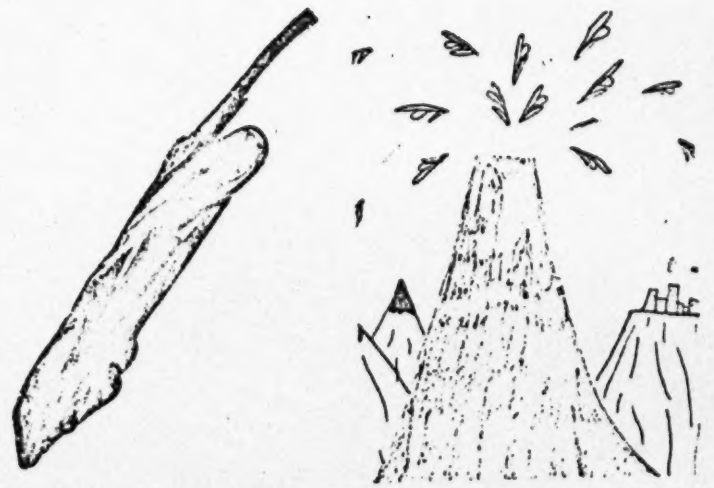
DIVISION OF INSTRUCTION
TUCSON PUBLIC SCHOOLS

January, 1970

Vol. 4 No. 2



Independent Studies



Independent Studies are being conducted in the 8th grade class of teacher Lee Wright at Fickett Junior High School. Unidentified object (left, above) was found in Sonora desert. In a creative expression class, students depicted imagined origins (cover and right, above).

Independent Studies Seminars In Session

Teachers and administrators of Tucson School District 1 are attending a series of seminars this semester devoted to a microscopic inspection of Independent Studies — an interchange of ideas, the successes and failures of I.S. programs, structural needs for such pursuits and, in the end, the value to the learner.

The seminars are being held in Rincon High School Lower Level 8. They began Monday Jan. 12, with a repeat on Jan. 15, and will continue on Mondays and Thursdays (repeating Monday on Thursday) at two-week intervals until a summary session and evaluation scheduled May 21.

All District 1 teachers and administrators have been invited to sign up for the seminars. Each session consists of three fifteen-minute presentations by I.S. teachers or administrators, followed by two half-hour question discussion periods.

One hour of in-service salary credit is being offered for those who attend a minimum of seven sessions. Final entrance deadline is for the Feb. 9 seminar.

Independent Study has a variety of definitions which, when analyzed, narrow to the problem of how a teacher may maintain and increase constant motivation in a student.

William M. Griffin, of the Wayland School Department in Massachusetts and a pioneer in planned independent study programs has said, "To produce students who are effective in Independent Study is what education should be all about. Independent Study is not just a feature of organizational or curriculum change which can be added to or deleted from the school's program. It is the system of self-instruction in which each individual learner operates within the total system of the school's instruction."

More Freedom

He further defined I.S. as "A learning situation within the school day which allows a student to develop personal competencies through experiences as an individual but in interaction with others when needed."

I.S. is characterized by freedom from constant supervision. Griffin says, "Students read, write, contemplate, listen to records and tapes, view, record, memorize, create, build, practice, exercise, experiment, examine, analyze, investigate, question, discover and converse. Independent Study emphasizes the individual's role in learning. It implies that all students possess potentialities for self-initiative, self discipline, resourcefulness, productivity and self-evaluation."

Working under the direction of Allan S. Hawthorne, Assistant Superintendent for Secondary Education, the Pre-planning committee for the District's I.S. seminars — David T. Smith, Coordinator of Science, John F. Bockman, Coordinator of Languages, and Alfred Zammit, Coordinator for Business Education — evolved a tentative definition of I.S.:

"A teacher-planned or teacher-guided course of study in which the student is granted more or less complete responsibility for organizing his work (or for using programmed and similar materials), pacing himself, planning objectives, utilizing resource persons and materials, etc., under conditions of quality control which do not frustrate the student's independence."

This committee then produced a second, or working definition. "Independent Study is that which the students are doing when the teacher says they are doing Independent Studies."

Light-heartedly, but not too tongue-in-cheek, the group then devised a third definition — to be filled in after the seminar series:

Third Definition

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(See Page 3)

UPDATE
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I.S. is not new to District 1 by any means but until the current seminars it did not receive a general evaluation or examination. Now, the District may learn in which direction to move.

A number of different approaches to I.S., the philosophy of it and evaluations will be presented those attending the seminars by teachers and administrators who have had practical experience. Presentations will be made in the form of reading of papers, sometimes augmented by audiovisual means.

Abstracts of seminar presentations have been made available to UPDATE and for the purpose of attracting interest in those not now registered for the seminar series, portions follow:

John F. Bockman, District Coordinator for Languages in Secondary Education, will present a paper: "Independent Study of French, German, Latin, Russian and Spanish by Eighth Graders Using Programmed Materials or Learning Activity Packages with Guided Supplementation and Occasional Conversational Exchange Provided by Consultants Who Speak the Language Being Studied."

This project provides thirty selected eighth graders at Townsend Junior High School with the use of a structured, commercially-prepared course of study and correlated tapes in French, German, Latin or Spanish. The course permits students to work independently at individual paces or small group speed, at their option. Students are released from reading classes and are provided with proper equipment and space.

A consultant is available on a once a week average. Individually prescribed supplementation is based on individual need and/or preference, taking into account the characteristics of the language program in the high school to which the student is heading.

The project also includes a system of self-evaluation, a carefully kept record of individual performance and a detailed log of student-consultant interaction in the language. Scores on standardized proficiency tests in all the language skills will become part of the record at the end of the year.

Learn By Doing

Merle A. Denning, teacher of Industrial Education at Tucson High School, calls I.S. "Individual Exploration: A Challenge to High-Level Learning" and he will make a presentation on work in Technical Illustration in the Industrial Arts curriculum.

Denning feels that the art of learning is by doing. "Through individual problem-solving experiences the student is able to achieve his goal."

Technical Illustration education heads high-interest and enthusiastic students toward a position in a small group of professionals who command a very high rate of pay in the industrial and commercial field.

Denning's program is designed to release an able student from the usual required sequence of the learning process and allow his intellectual curiosity to govern his direction. Various kinds of papers, all types of equipment including colored ink in airbrush application, technos pens and various lettering devices are provided for the student's use.

This research type of participation has a three-fold purpose: It involves the relationship of department within the structure of the school; it involves the image of the program in the community; and most important, it involves the student.

Teachers and administrators attending the seminar will hear and see various approaches to I.S. and differences of opinions as to how it should be performed.

Violet W. Hurston, mathematics instructor at Palo Verde High School, has individualized students in her class by a dual grouping. She has written on "The Teaching of Two Classes Concurrently in an Attempt to Overcome Budget Limitations Without Eliminating One of Them."

Because of budget limitations and an underestimate of the number of potential students for the Algebra 3H class, the honor students were placed in a class with average students and the treatment of the situation was left in the hands of the teacher involved.

Says Mrs. Hurston: "Remembering the one-room school house and with the intuitive feeling of 'why not' on the teacher's part, it was decided to treat both groups of students as separate classes with separate assignments and when necessary, even separate books."

Results Are Better

She states that both groups seem to have benefitted in different ways from the presence of the other and from their own separation as well. "Results seem better than predicted or even hopefully expected."

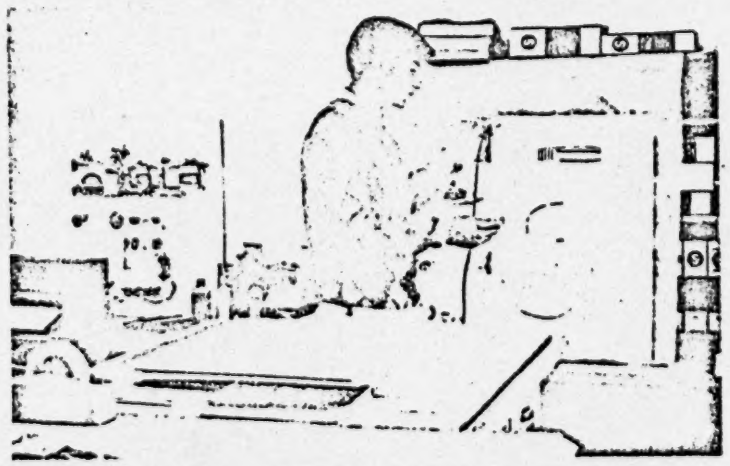
Mrs. Hurston sounds a note of warning which her presentation will develop: "Under like circumstances last year we used Independent Study the first half of the year. The results were disastrous."

In the abstract of a paper prepared for seminar presentation, Edward Kuhn, Science teacher at Catalina High School, writes: "Conventional methods of teaching chemistry have prepared students well for college work in the past, but have two major disadvantages."

These are how to accommodate the different interests of students and at the same time allow the slow-starting but above average student to achieve and experience early success at a slower pace without being penalized.

One solution is to provide a list of major topics with sub-topics in a desired sequential order. A list of experiments associated with each topic is made and an anecdotal comment book

(See Page 4)



The Tucson High School student, above, is doing individual exploration in air brush work in the Industrial Arts curriculum of Merle A. Denning, teacher of Industrial Education. Youth is preparing for a professional career in a very high rate-of-pay commercial field.

is maintained in an attempt to portray the progress of the student.

Students read, listen to taped lectures, use audiovisual aids, work exercises or problems, perform related laboratory exercises and take a non-graded, short-essay evaluation.

Results include a closer teacher-student relationship because the teacher spends more time working with individuals than large groups. Learning is more enjoyable and interesting to students working on their own, due to a lack of pressure to keep abreast, accompanied by the opportunity to explore in great depth in an area of particular interest.

The paper to be presented by Science Department Chairman Francis B. Rickert, Rincon High School, deals with: "Independent Study in Science: I — Independent Study as a Separate Course. II — Independent Study for In-depth Study of Interest Areas for the Better Students in Regular Classes."

Explore In Depth

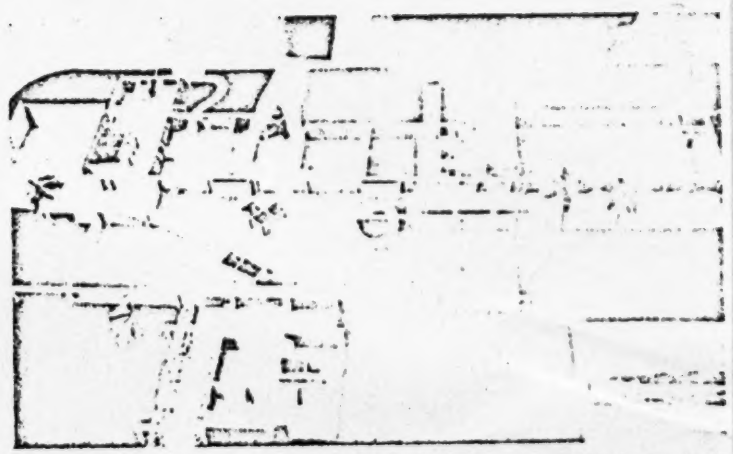
After a year in a high school science class, an I.S. course in science is offered to 10-12 grade students by permission of the teacher involved. The student must present a research problem on which he would like to work.

"The program allows the good student to explore areas of individual interest in depth. The students do the basic work of the class and are then free to spend their time on those things that interest them, as reference reading, experimenting or other useful activities that interest them," Rickert says. Most important, he states, is that they become involved in learning rather than working for a grade.

David T. Smith, District Coordinator of Science, has scheduled a presentation on "Science — A Process Approach, Re-Written for Presentation to Eighth Grade Science Pupils Who May or May Not Have Studied Elements of the Materials Previously."

This is a kindergarten through sixth grade sequential program based on the concept that what is taught children should resemble what scientists do. Smith says, "Presumably, scientists make observations, classify, infer and perform experiments by increasingly complex development (learning) or processing of information. It is inferred that a hierarchy of learning can be detailed for these processes."

The Processes are "packaged" into units with program-type pupil guides so that a major portion of the full sequence is offered in a year's time. Materials and supplies have been developed over the past two years. A complete trial of this Independent Study program was first made possible with the opening of school last fall.



The hand of William F. Wedding, principal of the new Pistor Junior High School, points to the "modern one-room schoolhouse" area of the school's design. Home Economics, Art and Science studios open onto the carpeted area which lends itself to Independent Study, Team Teaching and group planning.

William M. Griffin (quoted earlier as a pioneer in I.S. programs) writes that if students are to take responsibility for their own learning throughout the school day, they must have access to appropriate spaces and facilities and that these spaces and facilities should be open and staffed at all times.

The Pistor Program

Erickson Elementary School, Cholla High School, still-under-construction Pistor Junior High School and to some extent Sahuaro and Santa Rita High Schools were designed with Independent Study and often-accompanying Team Teaching in mind.

William F. Wedding, principal of Pistor Junior High School, will report on the Pistor program.

In his abstract, Wedding states, "The building is a large carpeted learning center with arches leading to the Home Economics, Art and Science studios. Large and small group teaching techniques are planned to fully utilize all existing space." This will provide for group planning, team teaching and teaching assistants.

"Behavioral objects are to be identified and all subject areas will serve as vehicles for achieving them." Wedding states that the use of "discovery methods, problem solving and step-by-step training toward Independent Study are all part of the plans for this modern one-room school house."

Four Cholla High School instructors will present papers.

Russell G. Weir, Social Studies teacher, will present "A Learning Package for 11th Grade History Students Designed to Reveal Essential Skill Abilities Related to Individual Study."

The learning package provides basic directions, allowing for freedom of interpretation within an established framework. "Teacher availability must be scheduled for anticipated questions, the answers to which yield suggestions rather than solutions."

The sections of the package are divided into five parts — choosing a subject, constructing a rationale, writing behavioral goals, listing media and activity essentials and developing an evaluation device.

Classroom and library time are allocated and outside study time is recommended. Periodic conferences are scheduled to check rates of progress.

Assessments of efforts are made by the student and the teacher in that order.

Spanish Cue-Cards

Felizardo L. Valencia will speak on "Spanish for Non-Native Speakers: A Programmed Approach."

The approach is designed for students of any age, grade or capability level. Materials used consist basically of an individualized packet of cue cards and instructions for the student, a listening-speaking aid and a cue card used in group instruction.

Evaluation relies heavily on student self-appraisal since he knows what he is doing or is to do at every step of the

(See Page 5)

course. In addition to being an independent approach, the technique provides for large and small group interaction, Valencia reports.

Bob D. King, Visual-Technical Arts teacher at Cholla, will report on the "Learning Activity Package (LAP): Developing Individual Instruction Through an Observable and Measurable Teaching Technique."

The "LAP" is a highly-structured procedure written by the teacher. It allows an individual student to progress at his own rate and at his own level.

The responsibility for learning is placed on the student and, thus, the role of the teacher is changed from one of a dispenser of knowledge to that of a guidance function. With the LAP approach, a student may enter and exit from any particular course at any time, as determined by his own learning level and learning speed.

Chemistry Report

The fourth Cholla report will come from Robert G. Thomas, Science teacher. His subject is "Individualized Instruction of Physics and Chemistry."

In physics for juniors and seniors, one half of students' grades depends upon their performance of behavioral objectives. The remainder of their grade is based on one of several assignments to be completed in their notebooks. Lecture-discussions varied from none to three times weekly. Students progressed at their own rates.

In chemistry for the same grade levels, students are given a list of objectives and a notebook assignment for each unit. Monday through Thursday activities consist of lecture-discussion, laboratory work and Independent Study. Each Friday, students receive tests on all objectives previously discussed in class but not yet passed by that student.

Audiovisual aids are planned for use in the future.

At Doolen Junior High, an Independent Study program is being carried out by Richard Gorby, Social Studies teacher.

Purpose is to encourage "curious and capable students to plan and undertake their work with a minimum of supervision." In this program, for 33 students, classroom attendance is not required but it is not discouraged. Students are permitted to work outside the school as long as parents and coordinators know where they are at all times.

An I.S. Committee of staff members determines policy and makes decisions regarding the program. Two coordinators work closely with the group and all members of the faculty are available as tutors and advisors. A work-study room is provided and students are responsible for maintenance of an ideal working atmosphere.

States Gorby: "Evaluation is by regular testing in sensitive areas, frequent interviews with coordinators and, most important, student self-evaluation."

David M. Hooker, teacher at Tucson and Catalina High Schools, will report on the Mandarin Chinese language programs, which include an I.S. program in written Chinese.

The modern-dance is employed by Independent Studies students of teacher Virginia Robinson at Catalina High School. The project was initiated to explore ways to allow more individual creative work on dances and the related performing arts.

Chinese Program

The program began in August, 1967, with the feeling that such Chinese language classes would become a competitive alternative to traditional high school language courses.

In order to challenge the extremely bright students who are enrolled along with the above average students, a supplementary program of Independent Study in written Chinese was also set up.

Hooker states that "written Chinese is particularly well suited to Independent Study since it involves mainly the acquisition through memorization of ideographs." Twenty-three students volunteered for I.S. and set their own goals of learning from 160 to 650 characters."

The students worked independently, taking tests when they felt prepared and re-taking them when they were not satisfied with their accomplishments.

Space does not permit inclusion of other reports which will be presented at the seminars. However, the following titles and authors will be offered:

"Lee" Wright, of Ficket Junior High School, will present, "Development of Verbal and Non-Verbal Expression Through Inter-relation of Written or Oral Language, Pantomime, Drawing and Listening Experiences Arranged So that One Explains the Other or Shows Deficiencies in Understanding which Occur in Communication."

Marjorie Benson, Pueblo High School, has the subject, "Using Library Resources to Investigate a Topic of Personal Interest."

Elden C. Mathews, Tucson High School, believes that all education can turn to Independent Study as the key to fulfilling the intrinsic needs of all students and his paper will cover this philosophy.

Stanley Wagner, Tucson High School, has the subject: "Independent Research on a Literary Subject to Increase the Student's Knowledge in an Area of Interest and the Effective Presentation of that Information to an Audience."

Means Or An End?

Another philosophical presentation will be made by Charles E. Wook, Santa Rita High School. His paper's title is "Change, The Children of Change and Teaching Methods: A Means or an End?"

Chet Sheaffer, Coordinator of Cooperative Education, will present, "Independent Study of Cooperative Education (Distributive Education, Cooperative Office Education, Industrial Cooperative Education, Cooperative Food Education and Service Training and Cooperative Health Career Education)."

(See Page 6)

Individualized packets of cue cards and listening-speaking aids are used in Spanish for Non-Native Speakers at Cholla High School. Felizardo L. Valencia will present seminar paper on the study method.

Finally, Miss Virginia Robinson, of Catalina High School, will speak on "An Individualized Approach to a Modern Dance Presentation Through a Self-Directed Inter-Disciplinary Project in the Arts."

Other I.S. programs, which will not be explained at the seminars, are in existence in District 1, four of which have been reported to UPDATE.

Mrs. Faye Robinson reports on "Individualized Learning in Room 214 at Wakefield Junior High."

Twenty-six students, "below average" in achievement in mathematics, are using sets of "Individualizing Mathematics, Skills and Patterns" by Foley. The program is designed for the reluctant learner and is composed of eight, 32-page booklets covering fundamental skills and concepts, four booklets designed to motivate students, four in-depth cards for each main booklet, and a test booklet containing pre-tests and achievement tests.

Each student takes a pre-test and then works in his booklet at his own rate.

Mrs. Robinson writes, "I have paired a better student with a slower student so the slower student may receive more individual help than I would be able to give him. At the same time I feel it is helping the better student to deepen his own understanding of the material."

Achievement scores have been quite high — around 90 per cent.

Principal E. W. Palmer has developed an I.S. project at Wright Elementary School entitled "A Personalized and Individualized Spelling Program."

Objective of the plan is to challenge able students, provide an equal load for the average student and provide an equivalent list of words that are at the learning level of the less able student.

How It Works

Each week lists of 103 words from a spelling series are mimeographed. The lists are taken from units in a series starting with grade three and ending with grade eight. An additional 22 words of greater difficulty are included to provide words for students who can spell a great number of words in the regular list.

After a test on the words, the first 24 words misspelled are used as the student's spelling assignment for the week. Each child's list is different and is made up of words which he needs to learn to spell. The words are also at the grade level that students should be capable of learning.

During the week students work on learning the words misspelled and additional project work is provided for exceptional students.

"The program is especially helpful for combination classes since it is individualized," states the Wright report.

Again at Wright School, AAHPER physical fitness tests are given. Students then work on their deficiencies either at home or in school to try to develop themselves to their greatest capabilities.

Personal record sheets are sent home at the end of the year and awards will be given to students who have performed at or above the three high percentiles of 50, 85 and 100.

Mrs. Betty Richardson's fourth grade students at Rogers Elementary School are using an individualized mathematics program.

Each child makes a contract for the amount of math to be done within a specified time. After satisfactorily completing a conference contract, Mrs. Richardson evaluates the math accomplished in an evaluation conference. A new contract is approved after completion of the evaluation conference.

Tests Show Progress

A multichoice of tests is provided for the program at varying ability levels. Standardized tests in the first year have shown very excellent progress.

As Doolen School's Gorby reported, student self-evaluation of I.S. programs is "most important" and a number of these evaluations will be reported at the seminars. Among them, are the following:

"I believe the (I.S.) program has affected my life greatly. It most certainly has changed my personality. It has been the most enjoyable year of school I have ever had."

"I think that the program has given me more self-confidence, having a room to ourselves gave me a fuller sense of responsibility and I learned how to get along better with people as they are, not as I think they should be."

"I think members of the lower ability levels should be included. I know a guy who is not very intelligent at all, yet has memorized every NFL football championship game since 1936 — who played the game, who quarterbacked each team, where it was played, the date, and in some even the temperature. It seems to me people like this could learn just as well at high ability levels, if they were interested in what they were doing."

UPDATE agrees and applauds.

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APPENDIX C

LIST OF SEMINAR PAPERS

APPENDIX C

List of Seminar Papers

Benson, Marjorie. "Using Library Resources to Investigate a Topic of Personal Interest." 2 pp.

Bockman, John F. "Independent Study of French, German, Latin, Russian, and Spanish by Eighth Graders Using Programmed Materials or Learning Activity Packages with Guided Supplementation and Occasional Conversational Exchange Provided by Consultants Who Speak the Language Being Studied." 49 pp. (See ERIC ED 033 632, 040642, and 048 813 for additional information concerning the experimental project.)

Bockman, John F. "Innovative Independent Study Programs and Teacher Liability." 21 pp.

Cawley, Dennis. "A Seminar on the Brazilian Story." 2 pp.

Engel, Dorothy B. and Muramoto, Josephine. "Development of Greater Interest and Proficiency in Physical Science Classes (Grades 9-12) Through a Program of Instruction Involving Process Approach Method As a Form of Independent Study and Laboratory Science Using Behavioral Objectives." 8 pp.

Denning, Merle A. "Individual Exploration: A Challenge to High-Level Learning." 9 pp.

Gorby, Richard. "A Description of an Independent Study Program at Doolen Junior High School." 13 pp.

Hooker, David. "Independent Study of Chinese in Tucson Public Schools: How It Missed the Boat." 5 pp. (See ERIC ED for additional information concerning the project.)

Hurston, Violet. "The Teaching of Two Classes Concurrently in an Attempt to Overcome Budget Limitations Without Eliminating One of Them." 4 pp.

King, Bob D. "The Learning Activity Package: A Brief Statement of Need and a Proposed Program." 4 pp.

Kuhn, Ed "The Use of Semi-Independent Study Methods in Chemistry to Retain Above-Average but Slow-Starting Students and to Allow the Thorough Investigation of Topics of Particular Interest. 5 pp.

Mathews, Elden C. "The Teacher As Self-Actualized and As a Self-Actualizer to Meet the Present Needs of Education in Our Society and World." 7 pp.

McCorkle, Mary Belle. "How Erickson Provides for Independent Study." 5 pp.

Murray, Winifred. "Independent Language Experiences Can Arrest Potential Drop-Outs." 3 pp.

Rickert, Francis. "Independent Study in Science at Rincon High School: I) Independent Study As a Separate Course; II) Independent Study for In-Depth Study of Interest Areas for the Better Students in Regular Classes." 3 pp.

Robinson, Virginia. "An Individualized Approach to a Modern Dance Presentation Through a Self-Directed Inter-Disciplinary Project in the Arts." 4 pp.

Roy Phil. "Another View of Independent Study: Sixteen Troublesome Problems." 5 pp.

Sheaffer, Chet. "Independent Study in Cooperative Education (Distributive Education, Cooperative Office Education, Industrial Cooperative Education, Cooperative Food Education and Service Training, and Cooperative Health Career Education)." 5 pp.

Shoemaker, Susan. "A Description of Two Independent Study Methods Used in Two Business Education Classes." 8 pp.

Smith, David T. "Science--A Process Approach, Re-Written for Presentation to Eighth Grade Science Pupils Who May or May Not Have Studied Elements of the Material Previously." 13 pp.

Smith, David T. "Summary of Independent Study Programs As Presented by Members of the Spring Seminar." 5 pp. (See pp. of this report.)

Thomas, Robert G. "Individualized Instruction in Physics and Chemistry." 3 pp.

Valencia, Felizardo L. "Spanish for Non-Native Speakers, A Programmed Approach." 3 pp.

Wedding, William F. "Planning a Junior High School to Teach Students to Think." 4 pp.

Weir, Russell G. "A Learning Package for 11th Grade History Students Designed to Reveal Essential Skill-Abilities Related to Independent Study." 4 pp.

Wook, Charles E. "Change, The Children of Change and Teching Methods: A Means or an End?" pp.

Wright, Lee. "Development of Verbal and Non-Verbal Expression through Interrelation of Written or Oral Language, Pantomime, Drawing, and Listening Experiences Arranged So That One Explains the Other or Shows Deficiencies in Understanding Which Occur in Communication...." 4 pp.

Wagner, Stanley "Independent Research on a Literary Subject to Increase The Student's Knowledge in an Area of Interest and the Effective Presentation of That Information to an Audience." 2 pp.

APPENDIX D

CHECKLIST

CHECK LIST FOR THE EVALUATION OF NEW LEARNING ENVIRONMENTS

--by John F. Bockman

1. The teacher responsibly creates a new learning environment.

1. What evidence makes us think that this student can profit from this opportunity?
2. What and how much and when is this student going to have to contribute to make this a worthwhile experience? Does the student have the resources?
3. What and how much and when is the teacher or originator going to have to contribute to make this a worthwhile experience? Does the teacher or originator have the resources?
4. Is the teacher or originator structuring himself in or out of the program? Why?
5. Who (or what combination of individuals) has structured or will structure the program for the student? What are his (their) credentials?
6. If the program is unstructured, what makes us think that this student can structure a worthwhile program for himself?
7. If the student flounders, on whom is the burden of structuring a program going to fall? Is it likely to fall on someone other than the teacher or originator? Will the student be left without assistance? How long?
8. How well does the student understand his role in independent study? How has this been determined?
9. Has the student really accepted this role? How has this been determined?
10. Have the roles of the student, the teacher, and any others been duly recorded? How? Where are these records? Who has access to them?
11. Have the possible roles of others been considered, e.g. librarians? Has their consent been secured? Have they been taken into account in the anticipation of problems?
12. Is some <u>one</u> person responsible for discharging the duties of this program? Who? Are others uninvolved? Why?
13. To what extent and how is the responsibility shared? Is this recorded? Who shares the responsibility?
14. Is there unanimity in serious matters among all who share the responsibility? If not, why not?
15. Do circumstances require that one person more than others assume a high degree of risk? How are others protected if something goes wrong?
16. What written information has been put in the student's hands? Where is this recorded?
17. How have parents been advised? Have they consented? How? Where are the records?
18. Is there a contract? Who wrote it? Where is it?
19. Has the student received a thorough indoctrination in the nature and purpose of the program, his responsibilities, the risks, etc? How was this done? Is it recorded? Where?

20. Have all potential risks been thought out? Is there a record? Where?
21. Do the student and parents know how the student's work will be evaluated and by whom? Is there a record of parental reaction to this plan?
22. Have parents expressed any reservations about this program? Is this recorded? What was done to satisfy parents? Are their reservations to be ignored?
23. Have rules and regulations pertaining to the program; facilities, materials, and equipment to be used; conduct; use of time, etc.; been duly promulgated? How?

II. <u>The student responsibly enters the new learning environment.</u>

1. Has the program been presented to the student as a requirement or as an elective? What is the philosophy behind this?
2. If an elective, has the program been presented on a take-it-or-leave-it basis or has there been a deliberate effort to stimulate and motivate the student?
3. Is there any prestige attached to independent study in the given environment?
4. Does the opportunity seek the student or does the student seek the opportunity?
5. Must the student be academically talented to enjoy this opportunity? Can an academically talented but irresponsible student study independently, whereas the converse would not be permitted?
6. Is there an effort to develop a strong set-to-learn? How is this done?
7. Has the teacher or originator specified behavioral objectives for the program? What are they?
8. Does the student know that he is expected to achieve these objectives? How is he informed?
9. If objectives have not been specified or communicated, does anyone know what the objectives of the program are? Who?
10. If the student is to develop his own objectives, does he know it? How?
11. Does the student have any skill in developing objectives and in designing a program to reach them? How do we know? Where did he develop this skill?
12. Is there a system for aiding the student in understanding the objectives, given or potential? What is this system? How does it work?
13. Does the student accept the program's objectives as his own? What is done to secure this?
14. Is it possible for the student to modify the program's objectives? How?
15. Is it possible for the student to reject the program's objectives? If so, what happens next?
16. Is this program thought of as a new learning environment, or as "new wine in an old bottle"? What has been done to create a new learning environment besides modifying traditional roles?
17. Is there a records system? What is it? Where are records kept? Who has access to them? Are there any notable gaps in the records?
18. If the schedule is traditional, what has been done to modify the effects of its rigidity? Are students simply dumped in some central location where they continually distract one another?

19. Are certain "abuses" tolerated? Why?
20. In order to avoid certain abuses, are real independent study opportunities restricted? What is done to secure a balance?
21. To what extent is the student really trusted?
22. To what extent is the student aided in learning independent study habits? How?

III. <u>The teacher and other agents, including the students, responsibly sustain the new learning environment.</u>

1. For how long is the initial stimulus expected to last? Does the program have a built-in renewal system? What is it and how is it to work?
2. Is the student held accountable for time? Which time? Spent where? Periods of time or cumulative time? School time or home time? How are these determinations to be made?
3. Is the student in violation of a regulation if he spends given time doing something else?
4. Is the expenditure of so much time an essential condition of learning (e.g., it takes anyone at least twenty hours of concentration to develop this skill), or is it relatively immaterial (e.g., one person will grasp a concept instantaneously, whereas another person may never fully grasp the concept.)? Has this been analyzed from the standpoint of accountability for time?
5. If time is an essential condition of learning, does the program require keeping a record of time? If not, why not? If so, how is this done?
6. If the program involves skill development, how is this development supervised?
7. Is there a syllabus of learning objectives?
8. Does the student know what these objectives are? Does he have an opportunity to agree to them? How is this accomplished?
9. Does the student have an opportunity to modify certain objectives within the given framework of objectives? How is this done?
10. Is the achievement of objectives evaluated? How? When? By whom?
11. How is achievement recorded and reported?

IV. <u>Educators and others share responsibility for guiding students through the new learning environment toward excellent learning outcomes.</u>

1. Is the supervision of this program an individual or a shared matter?
2. What is the make-up of the group sharing supervisory responsibilities?
3. Are there any affected persons whose cooperation has not been specifically solicited, e.g., librarians?
4. Are there any affected persons who have not been involved in planning and in decision-making? Why?
5. Are there any affected persons who are philosophically opposed to independent study or who have serious misgivings about it? How is this problem to be met?
6. Is any major portion of supervisory responsibility being unwittingly placed upon any more-or-less unwilling person?
7. Will the program unwittingly cause problems for anyone? Is the program unwittingly being imposed on anyone?
8. What has been done to develop a sense of the "shared environment" for independent study?

9. In the high schools, what has been done to develop departmental rather than individual control of independent study? Differentiated roles--counselor, advisor, motivator, teacher, diagnostician, record-keeper, resource person, etc.?
10. Does the supervisory group provide a congenial meeting or study place?
11. Is the supervisory group able to keep the various roles distinct depending on need? Is there a tendency to encroach on the student's rights as an independent scholar? How is this assured?
12. Is there substantial agreement in the group concerning evaluation? Is it in writing?

V. Educators and students arrange for the responsible use of physical, material, and human resources to sustain the new learning environment.

1. Is an effort made to create new associations for a new learning environment -- new space, new time arrangement, new ways of relating to the student? How is this achieved?
2. Are materials and equipment put within the control of the student? How is this done with safeguards?
3. Are materials and equipment reasonably adequate to help attain the objectives of the program? If not, how are deficiencies to be remedied?
4. If the student must go elsewhere for assistance, can this be done conveniently? Have potential resources been consulted in advance?
5. Are the library and its personnel taken for granted or have these resources had an adequate voice in decisions concerning this program?
6. Does the librarian retain certain discretionary rights which could significantly modify the program for a given student? Has this been spelled out for all concerned.
7. Have the rights of all potential resource persons within the school been anticipated and protected?
8. How will access to resource persons be controlled?
9. Have advance arrangements been made to secure the services of volunteer resource persons in the community? How has this been done? How are students advised?
10. Do all resource persons have an adequate understanding of the program and their potential role in it? Are they sympathetic and agreeable?
11. Is the program so structured that a major supervisory burden does not fall upon any resource person?
12. Is the school library the only place in the school where independent study may be conducted? Why?
13. Are students expected to develop independent study habits in the midst of general confusion? What are reasonable limits of tolerance in this matter? To what extent do school study conditions differ from those in the home? Should reasonable quiet prevail?
14. Are there places in the school that offer quiet study for those that need it?
15. What space and time inadequacies are predictable? Are they insurmountable, or can the program be built around them? How?

VI. Educators responsibly evaluate student and program strengths and weaknesses and provide for recycling or modification as needed.

1. What pre-testing procedures will the program employ? What post-testing procedures?

2. Will the program have a self-evaluation system? How will it function? How will it be supervised?
3. What will be the relationship of evaluation to announced objectives?
4. Is there a grading policy? What is it?
5. Will the student have a voice in the grading? How?
6. How will the evaluation be reported to parents? To counselors?
7. Will an anecdotal record by kept? Who will keep it?
8. Will the evaluation be discussed with the student? How, when, and by whom?
9. How will feedback from the student and others be collected and processed? Will it be made part of the evaluation of the program?
10. Will the program itself be evaluated? How?
11. Will the service of the TPS Research Department be used? If not, why not?

VII. <u>Educators responsibly modify all aspects of the new learning environment as needed.</u>

1. Will the student be permitted to drop the program without penalty? Permanently? Temporarily?
2. Is the program flexible enough so that radical changes may be made as needed? What procedures have been developed for any contingency that may arise?
3. Are student attitudes to be measured? How? Attitudinal changes?
4. Will student attitudes be allowed to modify objectives? Relationships?
5. Does the program recognize the student's need for rest and reassessment, that learning goes by fits and starts more than by constant orderly progression? How is this provided for?
6. What specific problems are imaginable in the implementation of this program? What solutions are possible?

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APPENDIX E

PROGRAM OF THE INDEPENDENT AND/OR INDIVIDUALIZED STUDY MANAGEMENT SEMINAR, 1971

Independent Study and/or Individualized Instruction Management

Seminar Series

This Seminar series is planned to present a series of ideas which might develop into an integrated system of management guidelines for independent and/or individualized instruction in the schools of the district. This is not a course on what to do --- this is an opportunity to think together with a group of teachers who have tried various ideas themselves. The aim is to help you construct guidelines for working with pupils in your classes as individuals.

The Seminar series will consist of eight sessions as listed below. It is planned to meet first on Monday, February 8, 1971, at 1600 (4:00 p.m.) in Lower Level 8 at Rincon High School; and every other Monday thereafter. (The March 8th* meeting is at Roskruge Junior High School.)

Each session will generally consist of a preliminary panel type presentation and discussion which will be followed by small group question and response periods. We will vary this format from time to time but we will always end promptly at 1800 (6:00 p.m.)

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SESSION 1: Monday, February 8, 1971-4:00 p.m. LL8, Rincon High--Mrs. Dorothy Engel, Moderator. The processes of responsibly creating a new learning environment; the set-to-learn; instruments for securing purposefulness-helping students analyze learning objectives and securing student affirmation of these; a records system; scheduling.

PANEL:
Mr. Al Slawson- Ass't. Prin. Pupil Personnel- Sahuaro High; Miss Ginny Moore-Eng. Teacher, Sahuaro High; Mrs. Josie Muramoto-Phys. Sci. Teacher, Sahuaro High.

SESSION 2: Monday, February 22, 1971 - 4:00 p.m.-LL8, Rincon High--D.T. Smith, Moderator. The processes whereby students responsibly enter worthwhile independent study programs; description and delineation of the student's responsibility, the teacher's responsibility, the organization of the program; instruments to record the new roles, relationships, and responsibilities; contracts; advice to parents; legal matters.

PANEL:
Mr. Orlo Eager, Prin.-Doolen Junior High; Mrs. Donna Marie Kane, 1st gr. Teacher, Lineweaver Elem.; Mr. Sam Westmoreland, Math. Teacher, Cholla High.

SESSION 3: Monday, March 8*, 1971-4:00 p.m. - Roskruge Junior High-Miss Joyce Sprinkle, Moderator. The processes of responsibly sustaining the new learning environment; instruments for keeping track - time sheets; learning objectives syllabi; periodic objectives contract form; periodic objectives evaluation forms.

PANEL:
Miss Sue Clark- Health & P.E. Teacher- Tucson High; Mrs. Andrea Milligan-Intermed. Teacher, Exploratory Learning Center; Mr. Jasper Wilson- Science Teacher- Roskruge Junior High.

SESSION 4: Monday, March 22, 1971, 4:00 p.m. - LL8, Rincon High --Peter Gazzola, Moderator. The process of cross-educator responsibility for guiding students; the shared school and community environment; interdepartmental corrdination and control of independent study (communication, scheduling, monitoring); cross-educator consultant and/or advisory roles; anticipating and defining new educator and student roles.

PANEL:
Mr. Samuel Turner- Read. & Art Teacher- Pistor Junior High; Mr. Derald Hendrickson, Prin.-Catalina High; Mrs. Jane Johnson, Eng. Teacher - Cholla High; Mrs. Mary Belle McCorkle, Prin.-Erickson Elem.

SESSION 5: Monday, April 5, 1971, 4;00 p.m. - LL8, Rincon High - Mr. Bill Mitchell-Moderator. Responsible uses of physical, material, and human resources to sustain the learning environment; new role, new location; controlled use of media; controlled use of library; controlled access to human resources in the school; securing controlled use of volunteer resource people in the community; space problems; making do with inadequacies of all kinds.

PANEL:
Mrs. Barbara Hannum- Librarian, Catalina High; Miss Gertrude Wagner- Principal, Sewell Elementary; Mr. Phil Roy- Business Education teacher, Palo Verde High; Mrs. Virginia Sisco- Language Arts Teacher, Wakefield Junior High.

SESSION 6: Monday, April 19, 1971, 4:00 p.m. - LL8 Rincon High - Mrs. Violet Hurston, Moderator. The processes of responsibly evaluating student and program strengths and weaknesses; pre- and post-testing; grading by achievement of student-made or student affirmed learning objectives; reporting to parents; reporting to counselors; the anecdotal record; discussing achievement with individuals and groups; the use of surveys and questionnaires; working with the Research Department.

PANEL:
Dr. Charles Grubbs, Dir. Research and Development- Ed. Center; Mr. Conrad Quenelle, Prin.-Palo Verde High; Mr. Francis Rickert- Science Teacher-Rincon High; Mrs. Dorothy Engel, Science Teacher- Sahuaro High; Dr. A. J. Gehrels, Language Teacher- Palo Verde High.

SESSION 7: Monday, May 3, 1971, 4:00 p.m., LL8-Rincon High --Mrs. Lee Wright, Moderator. Provisions for modifying processes when necessary; changing horses in midstream; distinguishing among positive, neutral, and negative attitudes of students; recognizing need for and allowing reflection, contemplation, experimentation; problems and possible solutions.

PANEL: Mrs. Mary Belle McCorkle, Principal- Erickson Elementary; Mr. Jerry McHenry, Science teacher- Carson Junior High; Mr. Leonard Bryan, Librarian- Cholla High; Mr. Richard Gorby, Social Studies Teacher- Doolen Junior High.

SESSION 8: Monday, May 17, 1971, 4:00 p.m., LL8 Rincon High --Mr. Al Zammit--Moderator. Summary and evaluation, John Bockman, Coordinator of Foreign Languages, presenting. After a review by Mr. Bockman, small groups will be organized to re-examine each session. At least one guideline from each will be proposed to the general audience just before closing.

PANEL: Mrs. Dorothy Engel, Teacher,-Sahuaro High; Mr. David T. Smith, Coordinator of Science; Miss Joyce Sprinkle, Teacher-Tucson High; Mr. Peter Gazzola, Associate Coord. Research Teacher-Palo Verde High; Mr. Bill Mitchell, Librarian, Palo Verde High.

In-Service Credit is available for all participants who attend at least seven (7) sessions, including the final (8th) session. Your school office has an in-service credit application form which should be filled with the Personnel office prior to the second session.

APPENDIX F

COMMENTS IN SUMMARY AND EVALUATION

TUCSON PUBLIC SCHOOLS

Comments in Summary and Evaluation
by John F. Bockman

(Independent Study and/or Individualized Instruction Management Seminar Series, Final Session: Summary and Evaluation, May 17, 1971)

The seminar which we have concluded was concerned with the management of study and instruction. Independence and individualization of learning should not distract us from this fact: We were concerned with the management of learning and the management of instruction.

Management of one kind or another has always been a function of the teacher. At one time, for example, managing a pot-bellied stove was an important management task of a teacher. In itself, the term management presents us with few difficulties. It is when we isolate management as a discrete instructional function that certain problems can arise in our thinking. They arise because we may believe that the management function somehow detracts from or dehumanizes the teaching function. Perhaps this is because managing the pot-bellied stove did detract from teaching, and managing in the sense of policing halls does dehumanize teaching. But these are management "jobs", not the management function of a teacher. Evaluation, for example, is an instructional management function. Giving grades and entering them in a book are "jobs". Evaluation is the human act of a rational, sensitive being, we may assume. Assigning a grade--well, it sometimes just doesn't make much sense. So let us carefully discriminate between management as a function of the teacher and "jobs" which a teacher

often has to do in the discharge of his functions.

It was my task to attempt to summarize and evaluate what we did. In this task I had the help of the chairmen of the sessions of the seminar. To start us off, I offered some ideas which I hoped may help us see that good management is what we do when we instruct well. As a foundation for what I proposed, I suggested that there are two principles that we must hold firm to : 1) There is no efficient and effective learning without efficient and effective instruction; and 2) There is no efficient and effective instruction without efficient and effective management. This suggests that nothing purposeful happens unless it is caused. These principles apply whether we are thinking of traditional teaching, individualized instruction, or independent study. A corollary of all this is to say that while we may wish to increase the number of options for learners, chaos is never an option.

From time immemorial, good teachers have wrestled with two dilemmas concerning a balance in their functions. The dilemmas have never been so acute and so universal as they are today. Social and technological changes have suddenly created a Protean age--one in which almost anything can become almost anything else at almost any moment. As Hanzeli expresses it, we are today galaxies away from our concerns of just yesterday. As rapid as change was in the generations immediately preceding ours, the cruciality of the matter is that change has changed, as Strasheim points out with such insight.

I offered as the first dilemma facing the teacher:

Dilemma Number 1

Paternalism and autocracy in the teaching act are now inappropriate and increasingly unacceptable; but an abdication of critical functions and accountability by competent instructional leaders will not be tolerated by society.

The tasks of management in resolving the dilemma are suggested in points 1 and 2 below:

1. Reduce or eliminate an inordinate domination of learning by the teacher.
2. Preserve all the critical functions and the accountability of the teacher.

In a properly integrated system of management, solution 1 refers to the management of learning processes; solution 2 refers to the management of instructional processes, which may or may not include teaching in the traditional sense.

I offered as the second dilemma facing the teacher:

Dilemma Number 2

Universal learning must be accessible to all; yet excellence of performance must be achieved, both in some absolute sense and to the highest level of individual capability.

The tasks of management in resolving the dilemma are suggested in points 3 and 4 below:

3. Proportion educational opportunity almost exactly to the capability of the learner; and

4. Promote excellence of achievement absolutely and in terms of individual capability.

In a properly integrated system of management, solution 3 refers to the management of learning processes; solution 4 refers to the management of instructional processes, which, again, may or may not include teaching in the traditional sense.

If this analysis is correct, and if management of learning and instructional processes offers hope of resolving these dilemmas, then it is important that we carefully construct our concept of management.

We began our construct with the base that all teaching will occur in a programmed or a non-programmed mode. The non-programmed is more familiar to us from traditional processes. The programmed mode is to some degree an emerging mode, but it parallels the non-programmed as far as management needs are concerned, and should cause no difficulty in the development of our construct. (Refer to figure showing relationship of 8 modes of teaching. Adapted from Jakobovits, see page 11.)

On the base of both the non-programmed and the programmed modes, we can further develop our concept of management by positing the mass mode. This is familiar to us. We manage teaching and learning for masses of 30 to 40 pupils called a class. (Treated as one mind with 30-40 bodies.) Teaching can and does occur in the mass mode, so we may have imagined that learning, too, can and does occur in the mass mode. Now, learning can and does occur in a mass setting, but it cannot and does not occur in a mass mode. If learning does occur,

whether or not in a mass setting, it occurs in an <u>individual</u> mode. This is an important distinction to make, because it has a direct bearing upon our efforts to create individual modes of instruction. We may manage well the mass mode as it pertains to teaching, but we may fail miserably to manage the learning processes of the individual in the mass setting.

In the mass mode, we recognize with no trouble that teaching occurs in the <u>tutorial</u> mode. Very simply, the teacher tutors, that is teaches, a mass of 30 to 40 pupils called a class, as though it were 1 individual with 30 to 40 incidental faces. This is the act that means teaching to some people, and that's why the term <u>teaching</u> is now a troublesome one. The teacher who talks, tells, explains, argues, peps up, cajoles, or threatens a class is functioning in the tutorial mode.

Now, let's face it, most teachers have recognized from the year one that telling, etc. is often counterproductive, and often does <u>not</u> result in learning. There is no necessary causal connection between teaching and learning. Such perceptive teachers have functioned <u>facilitatively</u> part of the time. (Maybe a very <u>small</u> part of the time, but maybe, also, a <u>good bit</u> of the time.) They have usually done this by causing a lot of transaction to occur within the mass of 30-40 students. This is still mass mode instruction, but when the teacher causes learning processes to act rather than talks subject matter, he is acting facilitatively.

Now, these same parallels are found in the programmed mode,

except that the tutorial function may be taken over by a program entirely or to some degree. Sufficiently sophisticated programming can also assume the facilitative function, with or without the mediation of a teacher.

We see a gap in our construct. In fact, half our management construct is undeveloped.

By inserting the independent or individualized mode, we add to our construct the notion that the student can be managed. I don't mean "bossed". I mean his learning processes and instructional processes which provide structure for learning can be managed, when a student is not treated as part of a mass but is treated as an individual. (Let us remind ourselves that the student has never learned <u>as</u> a mass, but only <u>in</u> a mass.) What we are trying to do now is to free him from mass constraints while yet providing the management without which learning will be neither efficient nor effective. The whole purpose of this seminar was to answer the question: "How do we manage instruction for independent or individualized study?"

At this point, I would like to reiterate the first principles I suggested in the beginning: Without instruction there is no learning. Without management there is no instruction. Thus, by inserting the independent or individualized mode into our construct, we are demonstrating, I think, that independence and individualization are coordinate modes (with the mass mode) in the construct of management. Here, I believe, some go astray. Some assume that independence or individualization implies that the student does <u>what</u> he wants to do,

when he wants to do it, how he wants to do it, etc. without the constraints of form and structure, as though this block (individualized mode) had no place in our management construct.

The individualized mode is the deliberate and purposeful structuring of a learning system for the individual by the teacher or by the individual himself. The independent mode is the deliberate and purposeful structuring of a learning system by the individual for himself with a minimum of external constraints. The teacher facilitates the structuring of the learning system to some degree or other. If the teacher is not facilitating this to some degree required by the needs of the individual student, there is possibility of serious defect of management (misfeasance).

Now, if we put all these little cubes together, we see our non-programmed construct as a unity of variable modes.

And by putting all these little cubes together, we see our programmed construct as a unity of variable modes. When they are all arranged in a single cube, we illustrate the unity of eight variable modes of instruction which require management. The blue sections represent teacher-directed modes, the yellow sections represent teacher-facilitated modes. Needless to say, each section is good, valid, moral, etc. in itself.

Now, instruction is surrounded by a host of variable constraints: personnel, personality, the shape of the curriculum, course content and materials, classroom activities, assignments, tests, timing, grading, the schedule, administrative expectations, etc., etc.

Effective and efficient management will require a professional decision from the teacher concerning which of the 8 modes of instruction will be applied to the teaching/learning processes, given the existence of each variable in the educational operation. Thus there is really no possibility that all the yellows are good, all the blues are bad, or vice versa. One mode may be more judiciously applied than another under certain given constraints, bearing in mind the needs of a particular individual or group. In general, however, we may be justified in concluding that historically and for psychosociological reasons, we are moving toward the yellow cubes (individualized facilitative modes).

Now, in this seminar we analyzed seven processes of management of independent and/or individualized instruction. We thus focused on half this cube without pretending, I hope, that the other half did not exist. I think what we were saying in this seminar is this: "Mass teaching modes are in some sort of trouble today. Tutorial modes are in some sort of trouble today. At least in some places. Cube 4 is especially in trouble today. What can we do to understand better the individualized and the facilitative modes, and how can we learn to manage them so that this new movement, if that is what it is, does not result in chaos, turmoil, and universal ignorance."

Going back to our dilemmas. Society seems to be telling us today that we must reduce, and in some cases eliminate, teacher domination of learning, but that we will be held strictly accountable for learning outcomes. We must ensure that all have an equal opportunity for access

to all learning processes, but that all must strive for excellence and many must achieve it. We doubt that this can be done through constant, consistent application of mass tutorial modes. It seems to be becoming increasingly obvious that these dilemmas can be solved only by the greater application of well-managed individualized-facilitative modes.

The seminar concerned itself with seven sets of processes in the management of independent and/or individualized facilitative or tutorial modes of instruction (cubes 1, 2, 5, and 6) which it is thought may help solve the two dilemmas.

In the final session we were charged with the task of recommending guidelines for working with students as individuals utilizing the processes that had been considered.

Our procedure: You divided into 7 groups to work with the person who chaired the original session which considered the set of processes in detail. You attempted to formulate at least one guideline which we thought should become part of an integrated system of guidelines for management.

Fifteen minutes before the end of the session, the groups returned and each chairman reported on the deliberations of his group.

Any person is free to react to the proposed guidelines in any way he chooses. We simply request that the input be recorded or written and submitted so that a complete record will be available.

What will happen to the guidelines?

First of all, everyone present will receive a copy of the deliberations of the final session.

The Steering Committee will analyze the results and the guidelines will be disseminated for additional reaction and input.

After that, it may appear that the guidelines are of such form and validity that they should be recommended to Board action of some sort at the earliest possible date. On the other hand, it may appear that further refinement is needed. Further action awaits the outcome of the work of the final session.

NON-PROGRAMED MODE				PROGRAMED MODE			
INDIVIDUALIZED MODE		MASS MODE		INDIVIDUALIZED MODE		MASS MODE	
FACILITATIVE MODE	TUTORIAL MODE	FACILITATIVE MODE	TUTORIAL MODE	FACILITATIVE MODE	TUTORIAL MODE	FACILITATIVE MODE	TUTORIAL MODE
1	2	3	4	5	6	7	8